

Application No.: 09/819,769

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REMARKS

Claims 1-27 are now in the application. Claims 1-8 and 22-27 are drawn to the elected invention related to nonionic surfactant and identified by the Examiner as Group I. Claims 9-21 are drawn to non-elected inventions and may be canceled by the Examiner upon the allowance of the claims directed to the elected invention.

Claim 1 has been amended for purposes of clarity by deleting an extra + sign. Claim 10 has been amended to rewrite "salts of sulfuric acid, salts of phosphoric acid" in place of "sulfuric acid or salts thereof, phosphoric acid or salts thereof". This amendment intends to delete "sulfuric acid" and "phosphoric acid" from the exemplified catalysts in claim 10.

Concerning the priority claim, attached is a certified copy of JP 10/274,563.

Claims 1-8 and 22-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over EP 228,121, EP 043,963, Edwards (US 4,396,779), or Tartakovsky et al (US 5,981,456). The cited references fail to render obvious the present invention.

The Examiner asserted that the broad teachings of each document encompass nonionic surfactants having the same cleaning properties and other physical parameters as recited by the instant claims because each cited reference teaches nonionic surfactants having the same alkanol and alkoxylate groups as recited by the instant claims (page 7, lines 10-14 of the Office Action).

Further it was asserted that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a nonionic surfactant having the specific cleaning properties and physical parameters as recited by the instant claims, with a reasonable expectation of success and similar results with respect to other disclosed components, because the broad teachings of each document suggest a nonionic surfactant having the specific cleaning properties and physical parameters as recited by the instant claims (page 8, lines 7-13 of the Office Action).

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However, each cited reference merely discloses general known nonionic surfactants, and each document fails to disclose a specific nonionic surfactant within the instant claims and also fails to suggest the claimed nonionic surfactant. Based on the general teachings of each reference, a person skilled in the art could not obtain the specific nonionic surfactant within the instant claims.

In particular, with respect to EP 228,121, the surfactants disclosed therein are not the claimed surfactants.

Concerning the polymers shown in Examples 1, 2, and 7 (Tables I-III) of EP 228,121, results concerning items (ii) and (iii) in claim 1 are shown below. These results were calculated based upon the values in the Tables I-III.

Please note that formula (2) is applied in item (ii) since v is less than 10, and that formula (4) is applied in item (iii).

	Example 1 (right column on Table I)	Example 2 (right column on Table II)	Example 7 (right column on Table III)
Mean Average Adduct No.	2.0	2.4	1.7
n_0	66.7	66.4	75.1
M_n	282.2	299.6	267.2
M_w	292.2	312.1	276.0
M_w/M_n	1.035	1.042	1.033
Formula (2) in (ii); Right Member	1.031	1.036	1.026
Formula (4) in (iii); Distribution constant (c)	0.605	0.685	0.636

These calculated values clearly show that while the disclosed polymers have a distribution constant (c) of less than 1.0 meeting the requisite of item (iii) in claim 1, each value of M_w/M_n is greater than each value from right member of formula (2), not meeting the requisite of item (ii) in claim 1.

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Thus EP 228,121 suggests polymers satisfying only item (ii), but not satisfying item (iii).

Also, EP 228,121 does not suggest the claimed polymer. Although EP 228,121 generally suggests how to obtain nonionic surfactants, it does not teach one how to obtain the claimed nonionic surfactant. Accordingly there is no motivation for a person skilled in the art to arrive at the claimed polymer.

Concerning EP 043,963, the surfactants disclosed therein are not the claimed surfactants. The disclosed surfactants, which were prepared using boron trifluoride monoetherate as a first-stage catalyst and potassium hydroxide as a second-stage catalyst, do not satisfy item (ii) and item (iii) recited in claim 1.

This is clearly shown in Comparative Examples 1 and 5 of the instant specification. Comparative Example 1 employs potassium hydroxide as catalyst (page 35), and Comparative Example 5 employs boron trifluoride diethylether as catalyst (pages 35-36). Both the polymer obtained in Comparative Example 1 and that in Comparative Example 5 fail to satisfy item (ii) and item (iii) as clearly shown in Table 1 on page 37 of the specification. Thus the combination of the above two catalysts could not give the surfactant that satisfies item (ii) and item (iii) recited in the claims.

Therefore it is clear that EP 043,963 does not disclose the claimed polymers.

Also, EP 043,963 does not suggest the claimed polymer. Although EP 043,963 generally suggests how to obtain nonionic surfactants, it does not teach how to obtain the claimed nonionic surfactant at all. Accordingly, no motivation exists for a person skilled in the art to arrive at the claimed polymer.

Concerning Edwards (US 4,396,779), such does not provide any bases for determining whether the disclosed surfactants satisfy item (ii) and item (iii) in claim 1. Accordingly, reference is made to EP 0092256, which was published on June 5, 1984.

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EP 0092256 describes the combined use of a basic salt of calcium and/or strontium, with a certain oxyalkylation catalyst promoter, as oxyalkylation catalyst. EP 0092256 describes on page 8, line 27 to page 9, line 11 that the combined use provides an oxyalkylation catalyst that results in the formation of products having a narrower molecular distribution than that which is prepared by use of only the basic salt of calcium and/or strontium as the oxyalkylation catalyst.

It shows that combined use of the basic salt of calcium and/or strontium with certain oxyalkylation catalyst promoter provides polymers having a narrower molecular distribution than the simple use of the basic salt of calcium and/or strontium.

Example 1 of EP 0092256 shows the combined use to give a polymer in which the left member of formula (2) in item (ii) in claim 1 is 1.2025 and the right member thereof is 1.0333, not satisfying item (ii) in claim 1 and in which the distribution constant (c) of formula (4) in item (iii) is 7.70, not satisfying item (iii) in claim 1. These values were calculated based upon the values shown on Table 1 of EP 0092256.

Thus even the polymer of EP 0092256 fails to satisfy item (ii) and item (iii) in claim 1.

Since the combined use provides polymers having a narrower molecular distribution than single use and Example 1 of EP 0092256 show the result of the combined use, it is reasonable that polymers resulting from the single use could not satisfy item (ii) and item (iii) in claim 1.

Edwards discloses said simple use, i.e. use of calcium salts (see column 4, lines 45-52). Therefore the polymers of Edwards cannot satisfy item (ii) and item (iii) in claim 1. Therefore it is clear that Edwards does not disclose the claimed polymers.

Also, Edwards does not suggest the claimed polymer. Although Edwards generally suggests how to obtain nonionic surfactants, it does not teach how to obtain the claimed specific nonionic surfactant at all. Accordingly there is no motivation for a person skilled in the art to arrive at the claimed polymer.

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Tartakovsky et al (US 5,981,456) merely suggest chemical formulas of anionic surfactants, and do not disclose and suggest the claimed items (ii) and (iii). Tartakovsky et al do not teach how to obtain the claimed specific nonionic surfactant at all. Accordingly there is no motivation for a person skilled in the art to arrive at the claimed polymer.

The cited references fail to disclose the claimed surfactant which satisfies item (ii) and item (iii) in claim 1. Each reference merely suggests general surfactants and does not provide any suggestion for a person skilled in art to arrive at the claimed surfactant. A person skilled in art could not prepare the claimed surfactants.

Only satisfaction of both item (ii) and item (iii) leads to the effects of the present invention of an aliphatic alcohol alkylene oxide adduct having surface activities comparable to alkylphenol-based nonionic surfactants and having no fear of environmental endocrine disrupters. Further, the aliphatic alcohol alkylene oxide adduct can provide, via its anionization, an anionic surfactant having improved foaming properties, detergency, stability and irritation.

These effects are not even remotely suggested by the cited references.

A generic statement in a reference does not suggest a specific material or species. See *In re Baird*, 29 USPQ 2d 1550 (Fed. Cir. 1994) and *In re Jones*, 21 USPQ 2d 1941 (Fed. Cir. 1992).

Also, the cited art lacks the necessary direction or incentive to those of ordinary skill in the art to render the rejection under 35 USC 103 sustainable. The cited art fails to provide the degree of predictability of success of achieving the properties attainable by the present invention needed to sustain a rejection under 35 USC 103. See *Diversitech Corp. v. Century Steps, Inc.* 7 USPQ 2d 1315 (Fed. Cir. 1988), *In re Mercier*, 185 USPQ 774 (CCPA 1975) and *In re Naylor*, 152 USPQ 106 (CCPA 1966).

Moreover, the properties of the subject matter and improvements which are inherent in the claimed subject matter and disclosed in the specification are to be considered when evaluating the question of obviousness under 35 USC 103. See *Gillette Co. v. S.C. Johnson &*

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Son, Inc., 16 USPQ 2d 1923 (Fed. Cir. 1990), *In re Antonie*, 195 USPQ 6 (CCPA 1977), *In re Estes*, 164 USPQ (CCPA 1970), and *In re Papesch*, 137 USPQ 43 (CCPA 1963).

No property can be ignored in determining patentability and comparing the claimed invention to the cited art. Along these lines, see *In re Papesch*, supra, *In re Burt et al*, 148 USPQ 548 (CCPA 1966), *In re Ward*, 141 USPQ 227 (CCPA 1964), and *In re Cescon*, 177 USPQ 264 (CCPA 1973).

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 21581-00260-US from which the undersigned is authorized to draw.

Dated: 8-21-03

Respectfully submitted,

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